

WHAT IS CLAIMED IS:

1. A semiconductor optical device including an active region and an optical guide, comprising:

    a first electrode formed on a top surface of the semiconductor optical device, the top surface including a area above the active region or a surface of the optical guide; and

    a film located at an area at least above the active region and applied on a portion of the first electrode.

2. A semiconductor optical device according to claim 1, wherein said film is made of an electrically highly insulative material, metal oxide, a nitride or a silicide.

3. A mounting structure comprising a mounting plate for mounting the semiconductor optical device of claim 1, wherein:

    a portion of the first electrode of the semiconductor optical device, which is not coated with said film, is fixed to a second electrode formed on the mounting plate via solder; and

    said film is in contact with the solder.

4. A mounting structure for mounting a semiconductor optical device including an active region and an optical guide, wherein:

    the semiconductor optical device comprises:

a first electrode formed on a top surface of the semiconductor optical device, the top surface including a area above the active region or a surface of the optical guide; and

a film located at an area at least above the active region and applied on a portion of the first electrode; and

wherein a portion of the first electrode of the semiconductor optical device, which is distant from the active region, is fixed to a second electrode formed on a mounting plate via solder; and

said film is in contact with both said solder and said semiconductor optical device.

5. A mounting structure for a semiconductor optical device according to claim 4, wherein said film is provided at least at a position on a vertical line connecting the active region and the mounting plate.

6. A mounting structure for a semiconductor optical device according to claim 4, wherein said semiconductor optical device is a ridge type device, a buried type device or a vertical cavity surface emitting type device.

7. A semiconductor optical device mounting structure according to claim 4, wherein said film is made of an electrically highly insulative material, metal oxide, a nitride or a silicide.

8. A non-hermetically packaged optical module in

which a mounting structure mounting a semiconductor optical device is incorporated therein, wherein:

the semiconductor optical device comprises:

a first electrode formed on a top surface of the semiconductor optical device, the top surface including a area above the active region or a surface of the optical guide; and

a film located at an area at least above the active region and applied on a portion of the first electrode; and

wherein a portion of the first electrode of the semiconductor optical device, which is distant from the active region, is fixed to a second electrode formed on a mounting plate via solder; and

said film is in contact with both said solder and said semiconductor optical device.